

Preface:

Lake Michigan Lakewide Management Plan

Introduction

One of the most significant environmental agreements in the history of the Great Lakes was the signing of the Great Lakes Water Quality Agreement (GLWQA) between the United States and Canada. This historic Agreement committed the U.S. and Canada (the Parties) to address the water quality issues of the Great Lakes in a coordinated, joint fashion.

Under the GLWQA as amended in 1987, the United States and Canada agreed “to restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem.” To achieve this purpose, the Parties agreed to develop and implement, in consultation with state and provincial governments, Lakewide Management Plans (LaMP) for open waters and Remedial Action Plans (RAP) for Areas of Concern (AOC). The LaMPs are intended to identify the critical pollutants that affect the beneficial uses of the lake and to develop strategies, recommendations, and policy options to restore those beneficial uses. Moreover, the Specific Objectives Supplement to Annex 1 of the GLWQA requires the development of Ecosystem Objectives for the lakes as the state of knowledge permits. Annex 2 further indicates that the RAPs and LaMPs “shall embody a systematic and comprehensive ecosystem approach to restoring and protecting beneficial uses . . . [and] are to serve as an important step toward virtual elimination of persistent toxic substances . . .”

In the case of Lake Michigan, the only Great Lake wholly within the borders of the United States, the Clean Water Act holds the U.S. Environmental Protection Agency (EPA) accountable for the LaMP. EPA has chosen a collaborative approach to the implementation of this responsibility, and a partnership of federal, state, tribal, and local governments in the basin is working with stakeholders in the Lake Michigan Forum to develop and implement the LaMP. The LaMP document serves as the guide to a continuing process of collaborative ecosystem management and partnership activities aimed at achieving the LaMP goals and restoring the 14 beneficial use impairments outlined in the GLWQA. LaMPs are to be completed in four stages: (1) when problem definition has been completed, (2) when the schedule of load reductions has been determined, (3) when remedial measures are selected, and (4) when monitoring indicates that the contribution of the critical pollutants to impairments of beneficial uses has been eliminated. These stage descriptions suggest a LaMP focused solely on the impact of critical pollutants. However, problem definition work revealed other major stressors, in addition to the critical pollutants, impacting the ecosystem. These findings indicated the need to go beyond the requirement that LaMPs address critical pollutants to integrate environmental protection and natural resource management in the process.

The LaMP process has proven to be a resource-intensive effort and has taken much longer than expected. As a result, the public has waited years for a document to review. This has created the impression that actions were delayed pending a completed document. In the interest of advancing the rehabilitation of the Great Lakes and to provide information to the public in a more timely manner, the Binational Executive Committee (BEC) resolved in 1999 to accelerate the LaMP effort (BEC 1999). Acceleration was defined as an emphasis on taking action based on the current body of knowledge and adopting a streamlined LaMP review and approval process. The LaMPs were directed to treat the stages of problem identification, selection of remedial and regulatory measures, and implementation as a concurrent, integrated process rather than a sequential one. Consistent with the BEC resolution, the LaMPs contain appropriate funded and proposed (non-funded) remediation, restoration, and protection actions for actual

improvement of the ecosystem. The LaMP includes examples of commitments by government, tribes, and nongovernment partners.

The BEC also recommended taking an iterative approach with periodic refinements based on the lessons, successes, new information, and public input generated. This adaptive management approach applied to the LaMP process will result in adjustments over time to address the most pertinent issues facing the lake ecosystem. This process begins with LaMP 2000, with LaMP updates planned every 2 years. The LaMPs are presented in a loose-leaf format that can be inserted in a three-ringed binder, which allows for easy updates, additions of new material, and removal of outdated information. The LaMPs for Lake Erie, Lake Michigan, and Lake Superior have common chapter components, but they differ in format and their amount of detail. Some chapters are incomplete, have identified data gaps, or are presented as drafts. It is intended that comments received will fill such gaps and that draft material will be finalized for LaMP 2002. With the help of the many partners and the public, we will be able to take the best qualities from each LaMP and design more concise and user-friendly LaMPs in 2002.

A Focus on Ecosystems

According to the Federal Interagency Ecosystem Management Task Force an *ecosystem* is defined as follows:

. . . an interconnected community of living things, including humans, and the physical environment with which they interact. As such, ecosystems form the cornerstones of sustainable economies. The goal of the ecosystem approach is to restore and maintain the health, sustainability, and biological diversity of ecosystems while supporting sustainable economies and communities. Based on a collaboratively developed vision of desired future conditions, the ecosystem approach integrates ecological, economic, and social factors that affect a management unit defined by ecological - not political - boundaries (1995).

The foundation of the ecosystem approach is relating human beings and their activities to the ecosystems that contain them.

A Focus on Partnerships

Each government, institution, organization, and individual within the Lake Michigan basin has a potential role in the stewardship of the ecosystem; however, no single government, institution, organization, or individual has the capacity to implement stewardship and achieve sustainability in the basin as a unilateral action.

The past decade has seen a profound shift from a top-down, command and control, government-dominated approach to a bottom-up, partnership-based, inclusive approach. This evolution is the manifestation of a number of changes including federal, state, and local relationships; local community empowerment; increased demands on local partners; and watershed-based institution building. In other words, if a sustainable Lake Michigan ecosystem is to be achieved, it falls to us to rearrange ourselves, our interest groups, and our governments into a new institutional framework—a framework that consists of existing organizations and governments “rafted” together as full partners in the implementation of the LaMP goals.

The idea of “rafting” originates with river rafting parties that often lash their rafts together to navigate rapids that pose a threat to single vessels. In the field of organizational management, this metaphor

describes the development of partnerships of organizations brought together to solve problems too complex to be dealt with by a single organization or agency. The rafting of organizations is important at the local level because of the potential to leverage and direct local, state, and federal resources into coordinated management efforts. In addition, many issues critical to ecosystem integrity in the basin, such as nonsustainable land use, habitat loss, and nonpoint source pollution, fall into the gaps within and between existing federal, state, and local programs. Rafted organizations with diverse memberships have the expanded strength and capacities to address these gaps.

Effective place-based partnerships are the result of the rafting of “**full partners.**” Full partners may be governments, organizations, interest groups, and individuals who act in collaboration with one another to achieve sustainable landscapes. Full partnership implies moving beyond the stakeholder model, wherein citizen committees (stakeholder groups) are briefed about agency plans and projects to a model based on full collaboration in the definition of sustainable landscape goals and the sharing of resources to achieve these goals. The challenge is to create the framework for participating organizations to contribute their expertise and resources, often on an uneven basis, but in a manner that allows all partners to participate in the decision-making on an even basis.

A Focus on Balance—Sustainable Landscapes

The interdependencies inherent in the ecosystem perspective require a balance between three fundamental elements: *environmental integrity*, *economic vitality*, and *sociocultural well being*. The ability of these elements to function in balance across time is a measure of *sustainability*. The ecosystem perspective requires a shift of focus from resource programs to resource systems. It places human activities and communities within an ecosystem and, consequently, within ecosystem management. It recognizes that human beings and their activities are part of the ecosystem and that they affect and are affected by its health. The goals of this LaMP are comprehensive concerns—such as the loss of critical habitats, decreasing biodiversity, nonsustainable land use, nuisance species, and threats to human health join the initial emphasis on critical pollutants.

The LaMP identifies the goals, necessary partnerships, and locations where ecosystem management must occur in order to attain sustainable landscapes in the Lake Michigan basin. Sustainable landscapes are local ecosystems that are healthy enough to provide a range of valuable benefits and services, both now and in the future. Such benefits and services to humans include the following:

- *Moderating natural events and human activities.* Healthy landscapes can make communities safer and more livable by tempering the effects of natural events and human activity. For example, wetland systems can absorb and store storm waters and thereby aid in flood control and ensure more routine flows and water levels in streams.
- *Enhancing social well-being.* Healthy landscapes provide services that make communities more enjoyable and rewarding. For example, they provide opportunities for outdoor recreation. To many, they also serve as a source of civic pride and personal and spiritual well-being.
- *Supporting local economies.* In sustainable landscapes, people meet the needs of the present without compromising the ability of future generations to meet their needs.

A Focus on Shared Information

Key to the engagement of a number of partners is the need for a common, accessible and scientific sound body of knowledge. It requires open dialogue between academia and agencies. It also necessitates a collaborative plan for monitoring in order to ensure currency in the knowledge base.

The LaMP is both a reference document and a proposal for a process to remediation of past errors and the achievement of sustainable integrity in the basin ecosystem. To this end, every effort has been made to insure that this LaMP contains clear, comprehensive goals, specific objectives, a strategic plan, and a system of indicators and monitoring for use in judging environmental status and effectiveness of current actions. It is also meant to serve as the foundation upon which can be built multi-disciplinary, place-based, public-private partnerships—the institutional arrangements required for the implementation of the plan and achievement of its goals.

A Focus on the Future

Finally, it is critically important to recognize that local partnerships cannot develop and prosper without resources. Partnerships provide capacities that extend beyond those possessed by their individual members. These capacities—the ability to conduct coordinated ecological assessments; to set shared goals, objectives, and indicators; and to align systems, plans and budgets—are recognized as necessary prerequisites for achieving the LaMP vision. This recognition must be accompanied by appropriate support and resources. Certain activities fall within the mission of governmental agencies that have a resource base of staff and funds. Other activities will be privately funded, and some may need to have diverse funds “rafted” together.

It is perhaps fitting that this version of the Lake Michigan LaMP will foster discussion and initial implementation during the first years of the new millennium, for just as the year 2000 serves as a symbolic point of historical demarcation, so too does this document and the process that it describes point to a new page in the management history of Lake Michigan. Because LaMP 2000 has embraced the goal of a sustainable Lake Michigan ecosystem, much of the required work will need to be accomplished by partnerships in local communities. The ability of these partnerships to achieve this goal will depend on the support of federal and state initiatives, programs, and resources as well as the committed engagement of the private sector on both the local and regional level. The extent to which this engagement provides such support for *place-based partnerships*, *ecosystem management*, and *sustainability* will determine the ability of the LaMP process to achieve its goal.